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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,596	10/19/2001	Mohammad Thudor	1171/39672/106	3006

7590

02/23/2005

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EXAMINER

PAIK, SANG YEOP

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/001,596

Applicant(s)

THUDOR ET AL.

Examiner

Sang Y Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12/6/04, 11/29/04.  
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-36 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-17 and 19-36 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10, 16, 17, 19-28 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniell et al (US 5,558,084) in view of Elsworth et al (US 4,708,831).

Daniell shows the breathing assistance apparatus claimed having a humidifier with a water heater plate (20) for humidifying the gas, a heater plate sensor (8), an ambient external temperature sensor (45), a conduit heater (10), and a controller (11, 61) to monitor the input power to the heater plate and the conduit heater. However, Daniell does not show the conduit heater power monitor providing an output that is indicative of the input power to the conduit heater.

Elsworth shows a conduit heater having a heating wire whose heating temperature is measured in terms of the resistance of the heating wire, and the changes of the resistance of the heating wire are used to give the approximate measurement of the wire and the temperature of the conduit. Furthermore, a temperature sensor is also provided to the conduit to sense the temperature of the temperature of the water vapor in the conduit to control the water vapor pressure therein. The changes in the resistance or the temperature of the conduit is a parameter that is an output indicative of the input power to the conduit heater since such measurement

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depends on the input power of the conduit heater. These processes are done with the controller/monitor (56).

In view of Elsworth, it would have been obvious to one of ordinary skill in the art to adapt Daniell with the conduit heater power monitor which measures the resulting resistance of the heating wire or the temperature of the conduit that is an indicative of the conduit heater power and further adjust the input power to the conduit heater to further determine the desired level of gas temperature as well as its humidity in the conduit.

With respect to the claimed steps, while Daniell does not explicitly shows the sequence of the claimed steps, it would have been obvious to provide the controller with such monitoring processes or steps to monitor the changes in the threshold parameter values, including the changes in the resistance or temperature or other related parameters, so that the power to the conduit heater can be adjusted to maintain the desired humidity or gas temperature as the conduit heater can be affected by the surrounding elements such as the amount of the liquid being heated and transferred and the ambient temperatures.

With respect to claims 8 and 26, it is well known in the art that power comprises the voltage and current since the power is the product of voltage and current according to the well known Ohm's law.

In claim 17, with respect to the recitation of the parameter being the power drawn by the water heater means divided by temperature of the water heater, it would have been obvious to one of ordinary skill in the art to use such parameter since the power and the temperature are proportionally related to each other that the claimed parameter would also be another form of the proportionally related value.

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3. Claims 11, 12, 15, 29, 30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniell et al in view of Elsworth et al as applied to claims 1-10, 16, 17, 19-28 and 34-36 above, and further in view of McComb (US 5,349,946) or Clementi (US 5,031,612).

Daniell in view of Elsworth shows the apparatus claimed except the gas supply means to supply gas to the humidifier.

McComb shows a gas supply with a flow meter/sensor to supply gas and the processor to determine the desired humidity level at the given flow rate. Clementi also shows a gas supply such as a blower to provide the pressured gas flow to provide the desired humidified gas. In view of McComb or Clementi, it would have been obvious to one of ordinary skill in the art to adapt Daniell, as modified by Elsworth, with the gas supply means to provide the air source that is humidified for the user and to control the rate at which the air/gas is provided.

4. Claims 13, 14, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniell in view of Elsworth , and McComb or Clementi as applied to claims 11, 12, 15, 29, 30 and 33 above, and further in view of Rapoport et al (US 5,546,933) or Levy et al (US 6,204,623).

Daniell in view of Elsworth , and McComb or Clementi, shows the apparatus claimed except the gas supply having a fan with the variable speed electric motor.

Rapoport shows a blower having a variable speed blower motor to supply air. Levy also shows that it is well known in the art that a fan or blower is equipped with a variably controlled motor. In view of Rapoport or Levy, it would have been obvious to one of ordinary skill in the art to adapt Daniell, as modified by Elsworth , and McComb or Clementi, with the variable speed motor fan to control the amount of gas and the rate at which the gas is supplied.

***Response to Arguments***

5. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

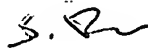
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sang Y Paik  
Primary Examiner  
Art Unit 3742

syp